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OBJECTIVES: To evaluate whether infliximab, a modern off-label biologic, is cost-effective for treating sarcoid posterior uveitis compared to methotrexate and systemtic steroids. Sarcoid posterior uveitis is a progressive eye disease that can lead to blindness if untreated. Ophthalmologists have utilized infliximab, a TNF-alpha inhibitor, which reverses effects of uveitis. **METHODS:** A semi-Markov model followed patients' therapy from the onset of sarcoid posterior uveitis using the societal perspective. The lifetime model simulated health states that could lead to successful reversal of uveitis with standard or intensified treatment with systemic steroids, methotrexate, or infliximab. Probabilities, health utilities, and costs were included in the model based on findings from literature. Costs and effects were discounted at 3% ($US; 2010 values). We conducted univariate sensitivity analyses, threshold analyses, and a Bayesian multivariate probablistic sensitivity analysis using 10,000 Monte Carlo simulations. Results were interpretted from a predetermined willingness-to-pay of $50,000/QALY. **RESULTS:** In order of cost, base case results showed systemic steroids most affordable ($26,871; 14.58 QALYs), followed by methotrexate ($40,351; 15.92 QALYs), and then infliximab ($46,547; 15.04 QALYs). Methotrexate was cost-effective compared to steroids, with an incremental cost-effectiveness ratio of $10,053/QALY. Methotrexate dominated infliximab. Univariate sensitivity analyses suggested that the model was sensitive to the utility of a patient's successful recovery from uveitis (0.84 QALYs). If patients' health utility after successful recovery is below 0.750, then infliximab has a greater net benefit than methotrexate. The multivariate probabilistic sensitivity analysis showed that methotrexate dominated infliximab in 60% of the simulations. **CONCLUSIONS:** This cost-effectiveness analysis suggests that despite major advances in the use of biologics for treating sight-threatening sarcoid posterior uveitis, methotrexate remains a less expensive and more cost-effective strategy. Methotrexate should be adopted as the standard of care for treatment considering its incremental cost-effectiveness at a reasonable willingness-to-pay. Other therapeutic options, such as infliximab, may be considered for certain cases.

PSS23

PHARMACOECONOMIC ANALYSES OF PARTIALLY HYDROLYZED INFANT FORMULAS IN PREVENTION OF ATOPIC DERMATITIS: COMPARATIVE RESULTS FROM 5 EUROPEAN COUNTRIES

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OBJECTIVES: Pharmacoeconomic analyses (PEs) were performed in five European countries to determine costs, consequences and cost effectiveness of a partially hydrolysed 100% whey-based infant formula, manufactured by Nestlé S.A, Switzerland (PHF-W) in the prevention of atopic dermatitis (AD) in 'at risk' children when compared to standard cow's milk formula (SF) or extensively hydrolyzed formula (EHF). **METHODS:** The PEs were performed in France, Germany, Spain, Denmark and Switzerland, using decision-analytic models depicting AD treatment pathways, as well as resource utilisation and costs associated with the treatment of AD in healthy yet 'at risk' newborns who could not be exclusively breastfed. A time horizon of 12 months including 6 months of formula consumption was applied, with country-specific resource use and costs. In four settings, SF was the main comparator and the final outcome of the PEs was the incremental cost per avoided case (ICER) of AD when comparing subjects who used PHF-W versus SF. Given a lack in significant differences in efficacy between PHF-W and EHF, a cost-minimization approach was used in all settings to compare these formulas. Three perspectives were applied: the Ministry of Health (MOH), the family and society. **RESULTS:** The analyses of PHF-W vs. SF generated ICERs ranging from €801 to €1343 (MOH), from -€1796 to -€454 (family) and from -€995 to €719 (society). The costs of formula and time loss were the most important cost drivers. In the analyses of PHF-W versus EHF in prevention, PHF-W demonstrated savings ranging from €4-€120 million, or €1.3-€64 million for the MOH perspective. The robustness of the models and the direction of the results were confirmed by one-way and probabilistic sensitivity analyses. **CONCLUSIONS:** In five European countries, PHF-W appears to be the product best positioned in prevention at a reasonable cost when compared to SF and with important cost-savings versus EHF.

PSS24

COST-EFFECTIVENESS OF USTEKINUMAB VS ETANERCEPT FOR SEVERE PSORIASIS

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OBJECTIVES: To evaluate cost-effectiveness of ustekinumab vs etanercept for severe psoriasis in Russia. **METHODS:** Cost-effectiveness analysis was performed. The data about efficacy and safety of biologic agents was analyzed. Cost-effectiveness ratio (CER) was calculated for ustekinumab and etanercept. Pharmaceutical costs were taken into account only. Achievement of PASI 75 was a criterion of efficacy, data about it was extracted from 12 weeks comparative clinical trial. **RESULTS:** The efficacy of ustekinumab was higher than etanercept in a direct comparative trial (67.5 and 56.8% of patients achieved PASI 75 by week 12 respectively). Both biologic agents were generally well tolerated in most patients. Ustekinumab was a bit less costly than etanercept: 470.00 and 496.62 thousands rub (16.92 and 17.88 thousands $) for 12-weeks treatment respectively. Therefore CER was more favorable for ustekinumab than for etanercept: 696.30 thousands rub (25.06 thousands $) and 874.33 thousands rub ($31.47 thousands $) per patient with PASI 75 achieved respectively. **CONCLUSIONS:** Ustekinumab is a dominanting alternative to etanercept for patients with severe psoriasis in Russia.

PSS25

THE COST-EFFECTIVENESS OF OZURDEX® (DEXAMETHASONE INTRAVITREAL IMPLANT IN APPLICATOR) COMPARED WITH OBSERVATION FOR THE TREATMENT OF MACULAR OEDEMA FOLLOWING CENTRAL AND BRANCH RETINAL VEIN OCCLUSION

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OBJECTIVES: Ozurdex (dexamethasone 700 μg intravitreal implant in applicator) was the first EMA licensed pharmacotherapy for macular oedema following central and branch retinal vein occlusion (CRVO, BRVO), a leading cause of vision loss. The objective of this analysis was to evaluate the cost-effectiveness of Ozurdex compared with a strategy of observation for the treatment of macular oedema (ME) following CRVO, and for BRVO patients with macular haemorrhage (BRVO-MH) or who have failed prior laser treatment (BRVO-PL). The analysis was performed from a UK NHS perspective. **METHODS:** A cost-utility model was developed to estimate the lifetime costs and effects of Ozurdex compared with observation in patients with CRVO, BRVO-MH and BRVO-PL based on the GENEVA 008 and GENEVA 009 studies. Patients in the model could move between six BCVA defined health states (best corrected visual acuity) based on the number of letters read correctly on the Early Treatment of Diabetic Retinopathy Study (ETDRS) chart. Cost data were obtained from literature and NHS reference costs. Utility values ranged between 0.599 and 0.862 and were derived from a preference-based scoring algorithm, the Visual Function Questionnaire Utility Index (VFQ-UI), valued by members of the general population using time-trade off (TTO). **RESULTS:** Ozurdex was shown to be cost-effective relative to observation with ICERs of £16,522, £17,741 and £6,361 for patients with CRVO, BRVO-MH and BRVO-PL respectively. One-way sensitivity analysis demonstrated that the proportion of patients affected in the baseline defined worse-seeing eye was a key driver of cost-effectiveness. Probabilistic sensitivity analysis demonstrated that at a threshold of £30,000, Ozurdex was a cost effective option in 85.2% of simulations for CRVO, 82.1% of simulations for BRVO-MH and 98.2% of simulations for BRVO-PL. **CONCLUSIONS:** Ozurdex is a cost-effective treatment option from a UK NHS perspective for macular oedema secondary to CRVO, BRVO-MH and BRVO-PL.

PSS26

THE USE OF A MIXED-TREATMENT COMPARISON TO ASSESS THE COST-EFFECTIVENESS OF OZURDEX® (DEXAMETHASONE INTRAVITREAL IMPLANT IN APPLICATOR) COMPARED WITH BEVACIZUMAB INTRAVITREAL INJECTIONS FOR PATIENTS WITH MACULAR OEDEMA FOLLOWING BRANCH RETINAL VEIN OCCLUSION

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OBJECTIVES: Ozurdex (dexamethasone 700 μg intravitreal implant in applicator) was the first licensed pharmacotherapy for macular oedema following branch retinal vein occlusion (BRVO) in the UK; however unlicenced use of Bevacizumab given by intravitreal injection was considered a potential comparator for economic evaluation. No head to head RCTs exist to compare outcomes; a mixed treatment comparison (MTC) was performed to synthesise available data. **METHODS:** A lifetime cost-utility model was produced with a treatment period of up to 3 years. Patients received an average of 9.96 bevacizumab or 2.24 Ozurdex treatments, 75% of which were costed based on a day case setting. Efficacy was measured in terms of letters gained on the Early Treatment of Diabetic Retinopathy Study (ETDRS) chart. This was estimated from an MTC where the network of evidence included comparisons of Ozurdex versus observation, observation versus grid laser and grid laser versus bevacizumab. QALYs were calculated from the letters gained using a coefficient obtained from regression analysis predicting the Visual Function Questionnaire Utility Index (VFQ-UI) score from BCVA. Differences in AE profiles were accounted for within the analysis. **RESULTS:** The day 180 results of the MTC indicated a difference (p=ns) in BCVA of 1.74 letters (95% CI -9.57 to 6.19) favouring bevacizumab; MTC Results at day 60 show this trend to be reversed. The analysis also demonstrated that an Ozurdex based regimen is less costly than a bevacizumab regimen making the ICER difficult to interpret. Therefore net monetary benefit (NMB) was calculated to demonstrate an NMB of Ozurdex vs. bevacizumab (based on day 180 results) of £2,228 at a willingness to pay per QALY of £20,000, robust to sensitivity analyses. **CONCLUSIONS:** The results of this analysis indicate that Ozurdex is a cost-effective treatment for macular oedema following BRVO when compared with bevacizumab, from a UK NHS perspective.

PSS27

WE TREAT EYES, NOT PEOPLE: THE SYSTEMATIC OVERESTIMATIONS OF UTILITY IN AGE-RELATED MACULAR DEGENERATION MODELS

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OBJECTIVES: Cost-effectiveness models in age-related macular degeneration use the utilities based on the better-seeing eye, because this mainly influence quality of life. Most models use the utility as if we only treat better-seeing eyes, although in trials the majority of the treated eyes are the poorer-seeing eyes. This discrepancy results in overestimating the QALY. Therefore a correction should be applied. The objective of this study is to estimate the influence on the (incremental) cost-effec-

tiveness when correcting for the poorer-seeing eye. **METHODS:** An existing Markov model comparing three treatment frequencies of Bevacizumab (Avastin) is used, to investigate the effect of the correction of the poorer-seeing eye. We examined several scenarios of the poorer-seeing eye; no influence(0%), 10% and 20% influence of the utility of the better-seeing eye. In addition, it can be argued that treating the poorer-seeing eye has a preventive function, as it can become the future better-seeing eye. In the model a switch of the better-seeing eye is assumed after two and four years. **RESULTS:** By including the correction of the utility of the poorer-seeing eye the incremental cost-effectiveness ratio's (ICER) change from €5,260, €31,167 and €3,712, to respectively €10,375, €60,124 and €7,377 (20% influence). Lowering the influence from 20% to 0% has an effect of respectively, €13,706, €78,314 and €9,796. When inserting a switch at two and four years, the ICER reduces from €10,375, €60,124 and €7.377 to respectively €7,325, €53,649 and €4,848 at four years and almost half at 2 years. **CONCLUSIONS:** The results show that overestimating the QALY by excluding the poorer-seeing eye results in a lower incremental cost-effectiveness. Poorer-seeing eyes should be used when modeling eye-diseases. Whether the poorer-seeing eye contributes 20%, 10% or 0% has a small impact on the change in ICER's. The preventive function of treating the poorer-seeing eye should also be taken into account.

PSS28

ECONOMIC BURDEN OF ADVANCED MELANOMA: FINDINGS FROM A LARGE US HEALTH INSURANCE DATABASE

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OBJECTIVES: To assess the economic burden of unresectable or metastatic ("advanced") melanoma. **METHODS:** Using data from calendar years (CY) 2003-2008 from a large health insurance database and case-finding algorithms that we developed for use in such data, we identified all persons with Stage III unresectable or Stage IV melanoma at initial presentation, as well as those who presented with earlier-stage disease in prior years and progressed to advanced disease (i.e., recurrent cases). We tallied health care costs on an all-cause basis for all such persons alive for one or more day in CY2008. Health care costs were tallied by category of utilization (e.g., hospitalizations, outpatient visits, outpatient pharmacotherapy, etc.) as well as on an overall basis. Reimbursed amounts were used as a proxy for costs. **RESULTS:** We identified 1527 persons with advanced melanoma in CY2008 (Stage III unresectable, 267; Stage IV, 1260). Stage IV patients were more likely to be hospitalized during the year than those with Stage III disease (39% vs 26%, respectively; $p<0.01$). Mean (SD) total annual cost per patient was $42,848 ($66,279), and was higher for those with Stage IV versus Stage III unresectable disease ($45,786 vs $28,983; $p<0.01$). Outpatient services (including the cost of infused drugs) accounted for approximately 54% of total costs, while hospitalization and outpatient pharmacotherapy accounted for 37% and 9%, respectively. **CONCLUSIONS:** Our findings suggest that the economic burden of advanced melanoma is high, especially in patients with Stage IV disease.

PSS29

TREATMENT PATTERNS OF PSORIASIS PATIENTS AND TRENDS OVER TIME

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OBJECTIVES: Several treatment options are available for psoriasis, an incurable dermatological condition, but there is limited information on actual treatment patterns. This retrospective study aimed to provide a snap shot of the use of psoriasis medications and recent trends over time in current clinical practice in psoriasis patients with co-morbid conditions. **METHODS:** Adult patients with ≥2 documented psoriasis diagnoses (ICD-9 codes: 696.1 were selected from a large US administrative claims database (2004-2008). The index date was defined as the latest date with a psoriasis diagnosis. Psoriasis treatments, including topical therapies, phototherapy, conventional systemic therapies, and biologics, were identified during the 6 months following the index date and described for the entire psoriasis population, a sub-group of obese patients (body mass index [BMI] ≥30), and stratified by index year to examine trends over time. **RESULTS:** A total of 106,128 psoriasis patients were selected. The mean age was 52±15 years and 52% were female. Overall, 62.3% of psoriasis patients were on topical therapies, 12.1% used biologics, 7.4% used other immunosuppressant agents, 5.6% used phototherapy and 27.2% were untreated. Over time, biologic use increased from 8.7% in 2004 to 21.0% in 2008, while the use of other treatments did not show this trend. In the sub-group of psoriasis patients with BMI information (N=1874; 646 obese and 1,228 non-obese), more obese patients were treated with biologics (20.0% vs. 15.0%) and other immunosuppressant agents (12.4% vs. 6.9%) than non-obese patients. **CONCLUSIONS:** The majority of psoriasis patients were treated with topical therapies. There has been an increase in the proportion of patients using biologics in the recent years. In addition, biologics and other immunosuppressant therapies were more likely to be used among obese patients.

Sensory Systems Disorders – Patient-Reported Outcomes & Preference-Based Studies

PSS30

ASSESSMENT OF UTILITY LOSS FROM DIABETIC MACULAR EDEMA BASED ON RESTORE TRIAL

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OBJECTIVES: Evidence is limited on the extent to which health state utility decrements differ between changes in the better-seeing and worse-seeing eyes following treatment. This study presents estimates of the utility levels as a function of the visual acuity in the treated eye stratified by the condition of the fellow (untreated) eye in patients treated for visual impairment caused by diabetic macular edema (DME). **METHODS:** Data from RESTORE clinical trial with (12 months follow up of ranibizumab treatment for DME) were analyzed. 8 health states were defined by BCVA in the treated eye. Mean utility was estimated using multivariate regression (repeated measures analysis). The regression was tested for confounders including disease severity. The influence of BCVA in the fellow eye on the health index was explored by separating treated eyes into cohorts according to visual acuity of the fellow eye: better, equal or worse. Results were compared with other published studies. **RESULTS:** The utility ranged from 0.86 (SE=0.014) with BCVA 76-100 letters (Snellen score) to 0.55 (SE=0.083) with BCVA 0-25 letters (unadjusted model). Disease severity had a non-significant effect on this range ($p>0.05$). BCVA of the worse seeing eye had a significant impact on the utility (utility decrement -0.11 from 76-100 letters to 36-45 letters), with better seeing eyes demonstrating a utility decrement -0.14 from 76-100 letters to 36-45 letters. Results were inconclusive for health states below 35 letters due to small numbers. **CONCLUSIONS:** This explorative analysis reveals that visual acuity of a worse seeing eye has a significant impact on utility and may be comparable to the impact on the better seeing eye. Importantly, these findings are supported by improvements in quality of life observed using the National Eye Institute Visual Function Questionnaire-25 (NEI VFQ-25) for DME patients treated with ranibizumab in the worse seeing eye in RESTORE.

PSS31

ASSOCIATION BETWEEN EQ-5D AND DERMATOLOGY LIFE QUALITY INDEX (DLQI) IN PATIENTS WITH CHRONIC HAND ECZEMA

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OBJECTIVES: HRQoL is often impaired in patients with skin diseases but it is often assessed with different instruments, generating data not directly comparable or not suitable to estimate utility. Assessing the association between HRQoL measures obtained with different instruments could be useful to obtain more complete data. The dermatology life quality index (DLQI) is a condition-specific questionnaire widely used to assess HRQoL in subjects with skin diseases. We aimed to estimate the association between EQ-5D VAS and utility score with the DLQI summary score (max 30 and min 0; higher score corresponds to more impaired quality of life) in patients with severe CHE and refractory to therapy with topical potent corticosteroids. **METHODS:** Within a naturalistic, multicentre cost-of-illness study; patients aged ≥18 years, consecutively accessing at the participating centres, completed the EQ-5D and DLQI questionnaires during the enrolment visit. Individual patient utility was estimated from EQ-5D responses using the standard UK scoring algorithm. A multivariable linear regression model was built to estimate the association between the EQ-5D VAS and utility score with the DLQI summary score, adjusted for age and gender. The bootstrap resampling was used to calculate standard errors and 95% confidence intervals. **RESULTS:** A total of 104 patients (mean age+SD=44.5+15.0, 39.4% male) were enrolled. DLQI mean+SD summary score was 11.3+6.3, EQ-5D VAS mean+SD=60.4+23.3 and EQ-5D utility mean+SD=0.50+0.31. EQ-5D VAS and utility showed a linear negative relationship with DLQI summary score. One point rise in DLQI was associated with a EQ-5D VAS decrease of 1.84 (SE=0.34; 95%CI=-2.52,-1.16; R2=0.261) and a utility index decrease of 0.025 (SE=0.005; 95%CI=-0.035,-0.014; R2=0.254) in utility. **CONCLUSIONS:** DLQI summary score is significantly associated with the EQ-5D VAS and utility index. Our results could be useful to derive EQ-5D information from DLQI data, to perform economic evaluations targeted to patients with severe CHE refractory to therapy with topical potent corticosteroids.

PSS32

IMPACT OF DRY EYE ON EVERYDAY LIFE (IDEEL) - SYMPTOM BOTHER: ESTIMATING CUT-OFF SCORES FOR DRY EYE SEVERITY GROUPS

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OBJECTIVES: The aims of the study were to estimate score ranges associated with dry eye severity based on the Impact of Dry Eye on Everyday Life (IDEEL) Symptom Bother (SB) domain, and to evaluate the overall performance of the SB domain. **METHODS:** A total of 210 participants (130 dry eye patients, 32 Sjogren's patients and 48 controls) completed the IDEEL SB domain and reported their degree of dry eye severity on an ordinal response scale of none, mild, moderate or severe. Ordinal regression analysis using a proportional-odds model was used to provide SB cut-off score ranges associated with the highest probability of membership of each of the four individual response categories. ROC analysis was used to examine the specificity and sensitivity of the overall SB scale. **RESULTS:** Ordinal regression revealed SB to be a significant predictor of patient-reported dry eye severity ($\chi^2=225.59$, $p<0.001$). Examination of individual probabilities associated with each SB score revealed that the following score ranges were associated with the highest probability of membership of each dry eye category: None (0-16), Mild (17-38), Moderate (39-65), Severe (66+). ROC curve analysis revealed excellent performance of the SB